

I. The Examiner's Rejections Under 35 U.S.C. § 112

A. Rejection of Claims 56 and 61-68 Under 35 U.S.C. § 112, ¶ 1

Claims 56 and 61-68 stand rejected under 35 U.S.C. § 112, first paragraph. Regarding claim 56, the Examiner contends that there is no written support for the “parallelogram linkage” recited in the claim. The Examiner also contends that there is no such support for the “crank and slider joint” recited in claim 61 or the “second end” of the linkage pivotally connected to the mounting member, as recited in claim 68. Applicants respectfully traverse the Examiner's rejection under 35 U.S.C. § 112, first paragraph.

Applicants fail to understand how the Examiner can conclude that no adequate written description exists for claim 56. Applicants note that claim 56 was submitted as an “original claim” in the present application at p. 33, lines 21-22. Moreover, claim 56 was also submitted in the parent application when originally filed.

The C.C.P.A. has held that an original claim is itself an adequate “written description” of the claimed invention. In re Gardner, 178 USPQ 149, 149 (C.C.P.A. 1973). Indeed, the MPEP states: “In establishing a disclosure, applicant may rely not only on the specification and drawing as filed but *also on the original claims....*” MPEP § 608.04 (emphasis added). Thus, Applicants respectfully submit that the above-referenced application, as originally filed, provides an adequate written description for claim 56.

Applicants respectfully submit that the phrase “crank and slider type joint” of claim 61 is adequately supported by not only the above-referenced application, as originally filed, but also by the parent application, as originally filed. In particular, Applicants draw the Examiner's attention to FIGs. 1, 3, and 4. In FIG. 1, the Examiner's attention is specifically directed to “bolt 14” and “lateral opening 16.” Comparing the position of bolt 14 in lateral opening 16 in FIGs. 2 and 4 with that of FIG. 1 shows that bolt 14 moves relative to lateral opening 16. This operation

is also described in the text of the above-referenced application. For instance, page 8, lines 17-19 recite a “lower arm 17 both pivots about bolt 14 and slides forward or backward relative to it” As is well known in the art, a joint such as the joint comprising bolt 14 and lateral opening 16 is known as a “crank and slider type joint”. See, e.g., P. Schwamb, A.L. Merrill, & W.H. James, ELEMENTS OF MECHANISM, 223 (John Wiley & Sons, Inc., 3rd ed. 1921) and N.P. Chironis, MECHANISMS, LINKAGES, AND MECHANICAL CONTROLS, 52 (McGraw-Hill Book Company 1965). Copies of the cited portions of these texts are attached as Exhibits 1 and 2, respectfully.

Regarding the Examiner’s rejection of claim 68, FIGs. 1, 2 and 4 shows that unlike revolute joint about pivot rod 7, bolt 14 is not part of a pivotal connection. Rather, the connection between the linkage and the mounting member is only pivotal about rod 7, and not about bolt 14. Instead, the mechanism can both rotate and move reciprocally about bolt 14. Thus, this connection is not a pivotal connection. Therefore, there is only one pivotal connection between the linkage and the mounting member, namely, the linkage rod 7. Consequently, “said second end of said linkage is pivotally connected to said mounting member solely by said second pivot connection” finds adequate support in the specification.

Based on the above, written support of claims 56 and 61-68 is contained in the specification. Accordingly, applicants respectfully submit that the Examiner’s rejection 35 § 112, first paragraph, be withdrawn.

B. Rejection of Claims 9-10, 24-25 and 61-68 Under 35 U.S.C. § 112, ¶ 2

Claims 9-10, 24-25 and 61-68 also stand rejected under 35 U.S.C. § 112, second paragraph. Regarding claim 9, this claim has been amended to provide antecedent basis for the

side face of the second stopping means. Applicants believe such amendment addresses the Examiner's concern about claim 9.

Regarding claims 24 and 25, the Examiner has suggested that these claims be amended to include language relating to the means by which the auxiliary shelf is attached to the desk, as recited in claim 1. However, the Examiner's suggestion, as it concerns claim 24, would unnecessarily narrow the scope of this claim. The means for attaching the auxiliary shelf mechanism to the desk and means for making the mechanism rotate relative to the desk are necessarily, but not always, separate components. Amending claim 24, as suggested by the Examiner, presupposes that the attaching means and rotating means are accomplished by a single work piece, which is not necessarily the case. Applicant's believe claim 24 fully complies with § 112. Applicants do not understand why the Examiner believes adding the requested language is necessary because the Examiner provided no explanation supporting the rejection. Applicants request further clarification from the Examiner.

Claim 25 has been amended to indicate that the auxiliary shelf mechanism is attached to the underside of a desk by means of a mounting track. It is believed that the amendment to claim 25 overcomes the Examiner's rejection under § 112.

As to claim 61 and 68, the term "relatively" has been deleted per the Examiner's suggestion, notwithstanding applicants belief that such term is in full compliance with § 112. The term "relatively" has also been deleted from claims 65 and 66.

Regarding claim 61, the "base" recited in the preamble is not being claimed. Claim 61 has been amended such that the "base" is described as the work piece on which the claimed invention is attached.

II. The Examiner's Rejection Under 35 U.S.C. § 102

The Examiner rejected claims 1-5, 7, 16, 17, 19-23, 27-31, 33, 43, 44, 46-50, 54-57, 61-64 and 66-68 as being anticipated by U.S. Pat. No. 5,292,097 to Russell (the "Russell patent"). These allegedly anticipated claims encompass more than one aspect of the present invention, but not all aspects. Consequently, these remarks in this section are directed solely to the claims being discussed. In that context, applicant respectfully submit that the Russell patent does not anticipate the claimed invention.

The legal standard for anticipation is that each and every element of the claimed invention be disclosed in a single prior art reference. In re Spada, 15 U.S.P.Q. 2d 1655, 1657 (Fed. Cir. 1990). Those elements must either be inherent or expressly disclosed and must be arranged as in the claim. Id. For anticipation, there must be no difference between the claimed invention and the prior art reference. Id. Application of the correct legal standard supports the allowability of the subject claims, which is discussed below.

A. The Arms Are Not Parallel Claims

Each of the claims alleged to be anticipated by Russell -- with the exception of claims 55 and 56 -- require that the side arm and the upper arm are not "substantially" parallel to each other. That is, the two arms remain substantially non-parallel irrespective of the shelf bracket's orientation. This feature is not found in Russell. Instead, the arms in the Russell device are parallel.

The Examiner contends, however, that when the Russell side arm (15) slides relative to the fourth pivot point (30), the upper arms (16) and side arms (15) will necessarily be moved "slightly" out of parallel. A closer examination of the Russell patent shows otherwise.

For instance, pivot point (30) is shaped so that side arm (15) can only move laterally, not vertically. Since side arm (15) can only move in one direction (horizontally), and upper arm (16) extends only in the direction which side arm (15) can be moved relative to the mounting bracket, then the two arms will necessarily remain parallel irrespective of whether side arm (15) slides along pivot point (30). To whatever extent, if any, the upper arms and side arms become off parallel, it would be such a minor consequence, forming no real, intended feature of the Russell device. Even assuming that the arms move “slightly” off parallel when side arm (15) slides relative to pivot point (30), which applicants disagree with, the overall positioning of the arms in the Russell device differs greatly than that of the arms of the claimed invention. Indeed, while the arms in the Russell device remain parallel or substantially parallel at all times, the arms in the claimed invention always remain substantially non-parallel relative to each other.

A comparison between Fig. 4 of the above-identified application and, for example FIG. 1 of Russell, confirms these differences. Connecting Russell’s four pivot rods forms a classic parallelogram. In contrast, connecting the three pivot rods and the slider (bolt 14) of FIG. 4 of the above-referenced application yields a variable structure that at most resembles a trapezoid. Applicants further note that, when viewed as a whole, Russell clearly teaches that a parallelogram linkage is necessary to maintain the auxiliary shelf in a substantially constant angle.

Furthermore, Russell lacks the auxiliary shelf mobility of the claimed invention. Each of the claims rejected over Russell specify a mechanism capable of positioning the auxiliary shelf in two directions – vertically and horizontally. The Russell device can position the auxiliary shelf in only one direction – vertically. Such difference in mobility is yet another significant distinction of the claimed invention over Russell.

In view of the above, since each and every element of the claimed invention is not found in Russell, claims 1-5, 7, 16, 19-23 ,27-31 ,33, 43, 44 ,46-50 ,54,57, 61-64, and 66-68 cannot be anticipated by such reference.

B. The Arm Can Be Parallel Claims

Also rejected as anticipated by Russell are claims 55 and 56, which are directed to a different aspect of the subject matter disclosed and claimed in the above-referenced application. An inventive aspect of the subject matter of these claims is the “no part of the auxiliary shelf mechanism extends below the bottom surface of the auxiliary shelf.” Claim 55.

Before the present invention, as evidenced by, for example, Russell, the art believed that the linkage arms should connect to the shelf bracket and that the auxiliary shelf should sit on top of the shelf bracket. (“[S]econd member 14 [*i.e.*, the shelf bracket] which is adapted to be fixed under the support platform [*i.e.*, the auxiliary shelf].” col, 2, lines 25-26) (emphasis added).) *See also e.g.*, Cotterill Fig. 8, Anstey Fig. 2, McConnell Fig. 3, and Smeege *et. al.* Fig. 1.

In marked contrast to the uniform teaching in the prior art that the linkage arms should connect under the shelf, the applicants found that a superior mechanism could be made if the linkage arms did not connect below the shelf. As that invention was contrary to the art including Russell, it was in no way taught or suggested. For this reason, the present rejection must be withdrawn and the claims allowed.¹

III. The Examiner’s Rejection Under 35 U.S.C. § 103

A. Rejection of Claims 9, 10 and 35-37

The Examiner rejected claims 9, 10 and 35-37 over Russell in view of Cotterill. In making the rejection, the Examiner recognized that Russell’s device does not disclose two side

¹ Note that in this aspect of the invention, the claimed subject matter encompasses both parallel and non-parallel mechanisms.

arms and two stopping means. However, the Examiner maintained that it would have been obvious to modify Russell's device by providing two side arms and stopping means as taught by Cotterill (FIGs. 5 and 6). The Examiner's conclusion is not supported by the references.

Cotterill's stopping mechanism differs greatly from that of the claimed invention. In Cotterill, a stopping mechanism is shown including a biased plate positioned along side of the linkage arms. Here, the biased plate is operable by a handle which moves protrusions into and out of slots. The protrusions and slots are positioned along side of the linkage arms. Traverse slots are also provided to enable the shelf bracket to move vertically and horizontally.

In contrast, the stopping mechanism of claims 9-10 and 35-37 involves contacting the rear end of the side arms against the side face of the stopping means. Further, the stopping action is effectuated, unlike Cotterill, by moving the side arm laterally, causing the rear end of the side arm to contact the surface of the stopping means. Such contact prevents and/or restricts further movement of the shelf bracket until the side arm is released from the surface of the stopping means. No such mechanism is disclosed in Cotterill. In Cotterill, the traverse slots function only to provide a non-accurate path for the shelf bracket. These slots are not used as a means to restrict movement of the shelf bracket. Instead, such movement is controlled by the handle attached along side of the linkage arms.

In any event, whether Cotterill's stopping device resembles that of the claimed invention is of no consequence because Cotterill fails to overcome all of the deficiencies of Russell. Neither Cotterill nor Russell disclose an auxiliary shelf mechanism wherein the side arm and the

upper arm are not substantially parallel. This particular feature is an element recited in claims 9-10 and 35-37.²

Based on the foregoing, Russell and Cotterill cannot be combined together to obtain the claimed invention. Thus, claims 9, 10 and 35-37 are unobvious over Russell in view of Cotterill.

B. Rejection of Claims 15, 24, 25, 42, 51 and 52

The Examiner has also rejected claims 15, 24, 25, 42, 51 and 52 over Russell in view of Anstey. Specifically, the Examiner contends that while Russell does not disclose rotating means, mounting tracks, or pivot points in the form of rods, it would have obvious to incorporate these components into the Russell device in view of Anstey.

Claims 15, 24, 25, 42, 51 and 52 are unobvious over Russell in view of Anstey. Anstey discloses a linkage means pivotally interconnecting a shelf bracket and mounting bracket. Like Russell, Anstey's device forms a parallelogram linkage, whereas the claimed invention of the rejected claims do not. Thus, whether Anstey discloses the use of rods, mounting tracks or rotating means is no consequence, as neither Russell nor Anstey, either alone or combination, teaches the suitability and/or advantages of using these components in conjunction with a non-parallelogram linkage. There simply exists no motivation to combine Russell and Anstey to produce the claimed invention. Further, even if the references were combined, they would not disclose each and every element of the claimed invention. Thus, claims 15, 24, 25, 42, 51 are unobvious over Russell in view of Anstey.³

² The Applicants note that the not parallel arm arrangement, which is an aspect of the these claims, is not an aspect of other claims. *E.g.*, claims 55 and 56.

³ Again, other claims do not include a not parallel arm limitation.

C. **Rejection of Claims 18, 45 and 65**

The Examiner also has rejected claims 18, 45 and 65 as being obvious over Russell in view of McConnell. Here, the Examiner acknowledged that Russell fails to disclose a locking knob or a coil spring to secure and support an auxiliary shelf mechanism. However, the Examiner contends that it would have been obvious to include such a knob and spring as taught by McConnell. Applicants respectfully disagree.

Dependent claim 45 has been cancelled because the claims from which it depends do not recite a locking element. Claim 18 depends from Claim 17. In response to the Examiner's rejection, Claim 18 has been amended to incorporate the limitations of Claim 17. Claim 17 was not rejected over Russell and McConnell. Claim 17 is directed to an auxiliary shelf device wherein the side arm is fixed to the mounting bracket by a locking mechanism. Given that claim 18 is narrower than claim 17 in that claim 18 recites a specific locking device, claim 18 should be considered patentably distinguishable over Russell in view of McConnell for the same reasons as claim 17.

In addition, contrary to the Examiner's position, McConnell does not disclose the use of locking knobs as a ubiquitous means of holding any linkage arm in position, irrespective of where or to what the linkage arm is attached to. At best, McConnell teaches the use of locking knobs to hold linkage arms in a fixed or locked position relative to a shelf bracket. In contrast, claim 18, as amended, specifically recites that the locking knob fixes the side arm into position relative to the mounting bracket. McConnell provides no suggestion, explicitly or implicitly, that a locking knob can be used in a the manner recited in claim 18. Thus, claim 18 is patentable over Russell in view of McConnell.

Claim 65 is also patentable over Russell in view of McConnell on the grounds that McConnell does not overcome the deficiencies of Russell. Neither Russell nor McConnell disclose an auxiliary shelf mechanism having both vertical and horizontal mobility, among other things.

D. Rejection of Claims 26 and 53

In addition, the Examiner has rejected claims 26 and 53 as being obvious over Russell in view of Cotterill and Anstey. In setting forth his rejection, the Examiner appears to have ignored the fundamental inconsistencies between Russell and Cotterill on the one hand and Anstey on the other. An integral part of Anstey's device is its lower gas spring. Applicants do not understand how a device can employ the locking mechanism of Russell and the gas spring of Anstey. Surely it must be one or the other. Thus, the references cannot be properly combined under § 103, and, for this reason, the rejection is improper and should be withdrawn. From the Office Action, the Applicants have not been able to ascertain where this gas spring resides in the asserted combination of references. In any event, Russell, Cotterill and Anstey are essentially limited to parallelogram linkages. Claims 26 and 53 are not.

IV. The Cited, but Not Applied, Art

Applicants further note that none of the Mileos *et al.*, Liu or Choy *et al.* patents cited by the Examiner constitutes prior art to the above-referenced application. Rather, the above-referenced application is a continuation of the application that matured into the Mileos *et al.* patent. Thus, the above-referenced application has an effective filing date prior to the filing dates of both Liu or Choy *et al.*

V. The New Claims

New claims 69 to 109 have been added to the present application. Written support for each of these claims can be found in Figures 1, 2, 4, and 6.

The newly added claims are patentably distinguishable over Russell, Cotterill, Anstey or McConnell either alone or in combination thereof. Specifically, independent claims 69, 81, 96, 102 and 106 require both a mounting track and a swivel mechanism for sliding and rotating the articulating arm mechanism relative to the desk. These features are not disclosed (in combination) in Russell, Cotterill, or McConnell.

Specifically, independent claims 69, 81, 102 and 106 require that the first and second arms are substantially not parallel to each other.⁴ This feature is not found in Russell, Cotterill or Anstey.

Independent claims 81, 96 and 106 recite as a claim element that at least one pivot connecting either the first or second arm to the shelf bracket is positioned above the shelving surface. Positioning one or more pivots above the shelving surface maximizes the amount of leg room beneath the auxiliary shelf. See specification, p.19. This feature is not disclosed in either Russell, McConnell, Cotterill or Anstey. Specifically, Russell, along with the other cited references, teach two pivot points under the shelf. For instance, in Russell FIG. 17, link elements **15** and **16** are attached to second member (shelf bracket) **14** at or below the surface of second member **14** that supports platform **11**. In contrast, claims 81, 96 and 106 require that at least one of the “links” connects to the “shelf bracket” at a point higher than the surface upon which the “platform” rests.

⁴ As noted above, this limitation does not appear in all of the claims.

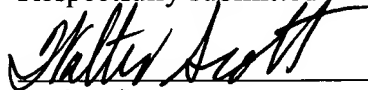
For the same reasons independent claims 69, 81, 96, 102 and 106 are patentable over the prior art, all claims depending thereon are also patentable.

VI. **CONCLUSION**

Applicants respectfully submit that the claims are in condition for allowance and respectfully solicit the same at an early date.

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Respectfully submitted



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